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ABSTRACT

Typically, efforts by English, speech, and developmental reading departments to make students "complete communicators" have been confined to one or two basic skills courses giving unsuccessful "one-shot" inoculations in the theory and practice of one of the communication competencies. As such communication is not taught in the context of the students' major and thus is not "tailored" to fit specific vocational needs, students seldom apply what they have learned outside the classroom. A suitable solution, meeting the need for both specialized training and continued work on skills throughout the academic career, involves asking the faculty to help students communicate more effectively in all classes. Several colleges experimenting with this concept of total academic responsibility have found that it allows students to improve all their skills and allows more effective teaching in content area courses. The crucial part of one such program is the summer faculty workshop, during which faculty are taught the rudimentary concepts of teaching communication skills in content area courses. Course syllabi are then rewritten to incorporate these experiences in the various communication processes. Internal and external monitoring of the program ensures its commitment to practical and sustained communication skills. (HTH)

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COMMUNICATION EDUCATION THROUGHOUT THE UNIVERSITY: AN ALTERNATIVE TO THE "ONE-SHOT" INOCULATION APPROACH

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Communication Education Throughout the University: An Alternative to the "One-Shot" Inoculation Approach

Few would argue with the belief that the educated person should be able to speak, write, read, and listen effectively. Typically, the task of creating this "complete communicator" is given to specialized educational units: English, Speech, and Developmental Reading Departments. Their traditional response to this mandate is to create one or two basic "skills" courses that have, as their philosophical basis, a conception of communication deficiencies that can be likened to a disease. Rather than create a "healthy host," these courses seem to intend to give a "one-shot inoculation" of varying amounts of theory and practice oriented to one of the communication competencies. This treatment is "administered" to the freshman or sophomore with the tacit suggestion that it will serve as both a remedy for deficiencies and a "preventative" against future "attacks of communication breakdowns." Thus armed the student can go forth and be successful in all future communication situations.

The "cure"does not seem to be working at either the high school or college level. Aptitude test scores are declining, businesses report decreases in skill levels in speaking, writing, and listening, and colleagues in all disciplines are questioning whether speech, composition, and reading courses should continue to be required or even recommended for their students. Students may communicate effectively in the basic course classroom, but once they leave they seem to forget, rather quickly, what they learned. The traditional "treatment" does not seem to be a long-term panacea.

It isn't that the "disease" has gotten worse. The "change" in effectiveness is a result of the increased importance of effective communication in education, business, and interpersonal relationships. Before, we measured competency only in the communication classroom, while now we are assessing it everywhere.

It should come as no surprise that a person may do well in speech or composition class and years later not do a competent job as either a sender or receiver of communications. We would not expect that an athlete out of training for four years would be able to perform as she did four years previously. Just as physical skills atrophy so do cognitive abilities. Teachers in other disciplines typically do not assign speaking, listening, reading, and writing tasks, per se. True, they may expect students to do these tasks well, but they seldom focus critically on the skill. They feel more comfortable evaluating "content" then "process." If problems are found, those problems are identified as "content" centered, even though they may be "process"

related. The students see no need to work on their skills by taking further communication courses. Such "added" courses are frills and irrelevant to their interests. Communication training is "too general" since it is not taught in the context of the students' major and thus not "tailored" to fit specific vocational needs. And, in any case, the major professors have not criticized their ability to communicate, only their inability to "grasp" the material they listen to and read, and "apply" it in their papers and oral presentations. It isn't the "process" that is faulty, it is the difficulty of the content.

This very real "literacy" problem has prompted many colleges and universities to create what amounts to "booster shots" that can be given to "diseased" students throughout their academic career. Tutorial centers are typical of this approach, but are often less effective than they could be due to under-utilization and skewed referrals. Since few non-speech and non-writing courses place emphasis on communication skills, students are not motivated to seek help. If it wouldn't directly affect the student's grades, why should they bother to spend extra time at a skills center? Students who do come to the tutorial centers are often urged to attend because they have problems that even non-communication teachers can not overlook. The students thus become stigmatized by the referral to what is known campus-wide as the "place for dummies." At best the remedial student is brought up to the level of the average student and then allowed to presevere until his skills atrophy and he draws the attention of another professor. Usually the student will rigorously avoid courses that might again high-light his inadequacies. Little is done to work on the skills of the average communicator, since if he is "doing alright in his course, there is no need for 'treatment'." Once again, the disease-orientation towards communication skills can be noted: no work is done to create better speakers and writers, therapy is indicated only in those cases of "deficiency."

One possible solution for this problem would be to require all students to take more communication courses. However, not only is this remedy unrealistic in the current atmosphere of localite, protectionistic department "turf building," but it also is not a solution for the "relevancy" issue. History majors do not need to develop in the same ways lawyers do. Chemists require different skills than do elementary teachers.

Another solution seems to meet both the needs for specialized training and continued work on skills throughout the academic career of the student. It directs itself at creating a "healthy host," rather than treating a disease as it occurs. This alternative remedy would have the responsibility for helping students speak, listen, write, and read more effectively diffused across the academic community. Given this solution, all faculty would be asked to help

students communicate more effectively in all of the classes they teach. In some classes they might stress one skill over another. In some disciplines greater writing skills might be expected than in others. Certainly different audiences would demand that the students developed different styles of communication. But the focus would be consistently held on being an effective communicator.

Such a remedy makes abundant pedagogical sense. Poor communication skills severely restrict learning. Up to 80% of a student's information is given him orally in the lecture situation. If he can't listen effectively, the efficiency of the educational process is severely impaired. If he listens and reads effectively, poor encoding skills still could prevent him from effectively applying that knowledge. Learning "process" is not an alternative to learning "content," rather, the two are symbiotic concerns.

While this proposed "ideal" may seem out of the reach of people working in the "real world," such is not the case. Several colleges have experimented with this concept of total academic responsibility and have found that it works. It allows all students to improve their skills, not just the poorest ones. It allows for more effective teaching in content-area courses. Contrary to the fears of communication specialists, it does not replace the traditional speech, writing, or reading course, but rather serves as an extension of the basic communication courses and as a catalyst for the tutorial center. In Central College where this concept was first tested, enrollment in the introductory speech class, composition course, and developmental reading program increased over the first few years of the program and enrollment in upper level communication courses almost doubled!

Such a program did not spring full born from the minds of its creators. Indeed it was almost twelve years ago that the first tentative moves in this direction were taken. A brief chronology of the evolution of the program is in order: In 1972 the first writing laboratory was established; in the same year two English faculty members established a faculty seminar in which, through six weekly meetings, fourteen faculty members from various disciplines were trained to more accurately identify strengths and weaknesses in student writing and to more effectively help those students improve their writing skills. In addition, faculty mandated that the newly revised CORE program take on the development of the skills across the curriculum as one of its major goals. In 1975 the faculty voted to require each Central graduate to achieve endorsement from his or her major department certifying competency in reading, writing, and oral communication. In 1976 the faculty established a 5-person ad hoc skills council to direct and coordinate an institution-wide program to improve students' communication skills. In the same year Central received a grant to help underwrite the improvement of the Skills Center, the component that had its beginning some years earlier as the writing laboratory. In 1979 Central College received an NEH Development

Grant which had the following goals: 1) to deepen the expertise of content-area faculty in the teaching of reading, writing, and oral communication within all content areas. Month-long summer workshops for three successive summers were held. 2) To support the faculty with leadership resources throughout the academic year. 3) To collect data and evaluate the success of the institution-wide skills program. 4) To disseminate the evaluation results to meet nation-wide needs for such data. In 1979, 1980, and 1981 month-long faculty workshops were held to train two-thirds of the faculty. In 1980 the ad hoc Skills Council became, by faculty vote, a standing faculty committee. And in 1981 and 1982 an extensive faculty survey was undertaken to determine the needs and expectations of the faculty with respect to the skills program. This survey, which included a detailed questionnaire and a follow-up interview with each faculty member, helped establish the agenda and the priorities for the Skills Committee in the post-grant years.

Because Central College was committed to the idea of an inter-disciplinary skills program before the NEH grant was awarded, the past few years were devoted to training and supporting more faculty to teach communications skills, assessing and refining the components that were in place, coordinating and focusing the whole skills effort, and disseminating information about the program to colleagues on campus and throughout the country.

The program has become more sophisticated through the years. As the understanding of and experience with the program increased, so did the level of enthusiasm and support of both the faculty and the students. The benefits to the College are clear. There has been a significant diffusion of knowledge about communication skills. Faculty report a heightened confidence in teaching communication skills. Faculty have noted an appreciable increase in their "spirit of colleague-ship." There has been a tremendous increase in the discussion and practice of pedagogy. Most significantly, there is acceptance of the idea that teaching communications skills across the curriculum is important and desirable. There now exists a large pool of good will and enthusiasn for the general goals of the program.

Today the skills program has, as its nucleus, a series of skills courses located in every discipline at all academic levels, departmental skills endorsement policies oriented towards the needs of the various disciplines, faculty workshops for training all faculty, an in-house consulting service, a comprehensive skills center, and a coding systen for monitoring students' skills development. This mixture of curricular and co-curricular mechanisms is bound together by the continuing commit-ment of the entire academic community to better the communication competencies of the students.

Without question the most crucial and, happily, the most successful part of the program is the summer workshops. The workshops are really the heart of the program because an informed faculty is essential for the skills effort to be truly interdisciplinary. During a one month period in the summer, faculty are taught the rudimentary concepts or teaching communication skills in content-area courses. Each participant reworks his or her various syllabi to include experiences in the various communication processes. Fully two weeks are spent considering speaking and listening, while another two weeks are devoted to reading and writing skills. Each professor is asked to produce assignments and methods for evaluating those assignments in each of the four skill areas. Modeled in part after the Bay Area Writing Workshops, each participant is asked to experience the frustration, fear, anxiety, and joy of communicating so that they might gain insights into what students experience. Thus they produce speeches, compositions, etc., and undertake listening and reading assignments designed for them and by themselves. Prior to this exercise the faculty are content to write instructions for assignments and establish criteria for judging those assignments, but are reluctant to engage in the actual teaching of the process. Many assume that their instructions are sufficient to guide the students and that any intervention on their part is superfluous at best, with the distinct possibility of mollycoddling students so that no effective evaluation of the students' skills can be achieved. This workshop assignment makes them realize that they have been engaged more in a game of "Twenty Questions" than in teaching communication. They have been content to ask the students to "guess what they had in mind" rather than to help them learn. They do not realize that instruction in communication is as necessary as it is in learning to work math problems or devise a psychology experiment. As one faculty participant said later, "It is easy to give intellectual assent to the idea (of making process oriented assignments) on a theoretical level, but until you experience the process for yourself you don't really know how to teach the process - the workshop was a valuable lesson for me."

The workshops are practical and give participants a forum in which to test ideas and to talk about pedagogy. One major positive outcome is the sense of competency instilled in the participants. Many faculty report an initial hesitancy concerning their ability to "handle" the task of teaching communication without massive retraining on their part. This fear is all but eliminated during the summer sessions. All feel relatively confident that, with the help of on-campus consultants from the Speech, English, and Developmental Reading faculty, they can help students learn to communicate more effectively.

Generally the content-area professors "learn their lessons" thoroughly in the summer workshops and follow-up sessions. The assignments and methods for evaluation and facilitation are innovative and exciting. Math professors find ways to incorporate essays and oral

reports in their basic math classes. Chemists develop rigorous assignments for their laboratory classes that include all four communication skills in an integrative and mind-expanding manner. Psychology professors extend the concept to activities outside the classroom as they devise and implement a college-wide symposium of student research in which each student participant presents a twenty-five minute oral report of personal research, undergoes a short question and answer session, and receives an informal evaluation of the presentation. These ideas and others go beyond the limits established by the dreams of the program founders.

But, in most cases, the faculty approach the task of creation without a criterion measure. They are unsure their ideas are sound. They doubt they can "carry them off." They "know" students will rebell at the idea of having to speak and/or write in their classes. They are "sure" that their merit evaluations will suffer.

The communication faculty tacitly was asked to hold the content-area faculty's collective hands. Constant reassurance, together with the very real success of first one effort and then another, helped the program weather its first year. Gradually this task was assumed by the faculty members themselves. The follow-up sessions provided the faculty with the opportunity to air new ideas. The successful experiences gained in the early part of the program bred confidence which was shared among all. The positive feeling was contagious. After only three years the number of classes that were designated "skills courses" grew from fifteen to over 200. Consulting is still done by the communication faculty, but the sophistication of inquiry is much greater, and the level of interaction is much more equal than it was. It seems that a communication education juggernaut has been created which needs only slight nudging to keep it on track.

In order to judge the type and direction of those "nudges," a great deal of monitoring and evaluation of the program has taken place.* Just as students need reassurances that they are progressing, so too do faculty and administration. A great deal of effort goes into the program each year and continued expenditures have to be justified by success. Periodic evaluations of the program are an important part of the program. Not only do they serve the "reward" function, but they also help to guide the future course corrections that any developing program must undergo.

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*The author is indebted to Walter Cannon, Project Director of the Central College "Across the Curriculum" Program for his help in gathering and interpreting this data. Further insights and wisdom, as well as "well turned phrases" concerning the evaluation of the program, were graciousl provided by Mary Ann Klein and Lincoln Blake, outside evaluators of the program, and by Joyce Huizer and Janice Cook, colleagues and fellow-travelers in the NEH Program. A more indepth description and analysis of the program can be found in the Final Report of the Program prepared for the NEH at the culmination of the Endowment Grant, #ED-0016-79-463. A less intense treatment of the same concept can be found in an upcoming book in the Jossey-Bass New Directions Series: College Learning Assistance, edited by Dr. Rebecca Rubin.

At Central College, both internal and external monitoring are done.

Internal monitoring and control of the program is the task of the "Communication Skills Committee," an elected body of concerned faculty and students, and several appointed administrators. Through the use of interviews and observations, and Communication Skills Committee monitors the progress of the program and governs the day-to-day decision-making. It is their responsibility to make sure that skills courses are, indeed, constituted as indicated. They solicite additional skill courses across the curriculum to fill gaps. They ensure that the continuing task of faculty education is accomplished. They assess the impact of the program on both the minds and behaviors of the students by statistically rigorous surveys and "before-after" analysis of communication variables. An intensive, three year study, based on interviews with the same group of students over the course of their collegiate career, revealed that fully 74% of the students noticed a significant increase in their skills which they attributed to the skills program at Central. 92% of the students indicated either a moderate or intense desire to continue bettering their skills. Using a technique of testing called "PRimary Trait Scoring," the compositions of students written when they were freshmen were compared with those generated by the same students during their junior year. Impressively, not one student demonstrated "skill atrophying," with most showing a significant increase in competency. This finding is in marked contrast to that conducted in 1963 by Albert Kitzhaber at Dartmouth, where demoralizing decreases were found in categories of measurement of skills between the sophomore and senior years. It seems that students are motivated to work on skills and value the effort sufficiently enough to expend quite a bit of energy to do so. More importantly, their effort and that of the Skills Program at Central seems to pay off!

A faculty interview was conducted to give further guidance to the Skills Committee in sustaining Central's unique commitment to communication Skills. The Committee wanted to find out which components of the skills program seemed to work and which ones didn't. It also sought creative ideas and practical ways from faculty for effectively keeping up mutual teaching, learning, and encouragement in skills without NEH funding.

An analysis of the responses to this survey of 37 participants in NEH Workshops and 28 non-NEH Workshop participants yielded some interesting information.

In response to a question concerning pages assigned for reading in a particular course, those not participating in the NEH-funded workshops reported that they require an average of 649 pages per term. In comparison, the NEH group reported an average of 580 pages required per term. The variety of readings required for NEH-ers appeared to be

slightly higher than for the Non-NEH'ers. There appeared to be no appreciable difference in the difficulty level of reading assignments between the two groups with both groups estimating slightly above Moderate Difficulty Level.

The findings from this study were in accord with one NEH'er who emphasized that she was more concerned with student level of comprehension of the reading than with the quantity of pages assigned. She attributed this shift in emphasis from quantity to quality to the NEH Workshop.

Workshop participants gave more attention to readability of the reading material they assign to students than Non-NEH'ers. Nearly one-third of the NEH groups used CLOSE technique for estimating readability. 41% considered vocabulary level and concept density while 57% considered the author's skill in communicating with the student. Over half of the NEH'ers consider author's expertise when evaluating reading materials.

While both groups made wide use of review of key terms prior to reading, the NEH groups were more likely to utilize structural analysis skills in reading understanding.

The NEH group was also more likely to give student assistance in comprehension by clarifying the level/type of comprehension required by the assignment, providing study guides and guiding the student in outlining important passages. The average number of process techniques utilized by NEH group was 8.41 as compared to 6.86 for the other group.

In review of the fifteen reading process steps outlined in the Interview Worksheet Guide designed for interviewers, the NEH group indicated greater utilization of all techniques for all but two of the items. These two items dealt with student accountability. The NEH professors themselves assumed a higher degree of responsibility for student high level comprehension of assigned reading than their counterparts.

The results of the Interview-Questionaire indicate a difference in writing assignments between the NEH Workshop participants and Non-Workshop faculty.

Research papers were required by 51% of the NEH group and by 32% of the Non-participants. Of those assigning research papers, 46% of each group required a preliminary bibliography. The NEH group attached higher requirements in the annotated bibliography (19% vs. 13%), working outlines (32% vs. 14%), rough drafts (30% vs. 13%), summary notes of readings (22% bs. 13%), and working thesis or prospectus (35% vs. 17%).

Short critical papers or essays were assigned by 57% of the NEH group as compared to 36% by the Non-NEH group. Neither group put high demands on students for journals with 11% of NEH and 13% of Non-participants requiring. "Write-ups" or reports on observations were required by 39% on NEH participants and 18% non-participants. Essay exams were given by 62% of the NEH group and 68% of the Non-participants.

In conclusion, there is clearly more emphasis on research paper assignments along with step-by-step expectations by professors involved in NEH Workshops. Both groups consider essay exams important.

The NEH group reported an average of 4.46 major writing assignments in a course each term while the Non-NEH'ers said they made an average of 3.0 writing assignments.

Of the twenty-eight persons who had not participated in the NEH Workshop and responding to the interview questionnaire, thirteen (46%) reported that they had been influenced by another NEH-er. Of these thirteen, eight were influenced by colleagues within their own department.

The results of the interview-questionnaire demonstrates that there has been considerable across the campus sharing of the skills and attitudes acquired through the NEH Workshops, and that the greatest impact has been within departments.

In answer to the invitation to reflect on changes in actual assignments and demands made on students, the NEH Workshoppers ranked their change between "Moderate" and "Substantial." The Non-NEH'ers ranked their change between "Slight" and "Moderate."

Both groups estimated student change slightly lower but in direct relationship to faculty change.

The oral assignments of the NEH and Non-NEH groups differ in that the percentage for individual oral assignments is higher for the NEH groups while the Non-NEH group assigns small group discussion and uses question and formal answer a higher percentage of the time.

According to results of the survey, those not participating in the summer workshops gave more listening assignments than the NEH'ers. These included class lectures, directed questions and answers, tapes and records, and student presentations. The NEH participant required listening in discussion groups slightly more often.

The average number of speaking/listening assignments reported in the survey were 5.03 by participants and 5.21 by the Non-participant.

The workshop participant is more likely to give students assistance in the steps in preparation for oral presentations such as, writing up and distributing criteria in advance, going over presentations, using peer evaluation/comment, and requiring the student to tape and listen to his/her own performance.

While there is agreement on emphasis of evaluation of content/ ideas in speaking evaluation for both groups, the NEH participants put more emphasis on organization, style, and mechanics than persons not involved in NEH Workshops.

In the area of listening, the NEH/er was more likely to test students on such items as, specific factual details, definitions/key terms, and general principles/applications.

In conclusion, it appears that the Non-participant puts higher demands upon student listening skills through class lecture, question and answer sessions, etc. However, the NEH participant is more likely to emphasize student accountability for attentive listening. The NEH Workshop participants reported utilization of 11.3 process techniques per term while the Non-NEH Workshoppers said they used an average 9.1.

Other methods were used to monitor the perceptions of students and professors of the skills program at Central as well. Of principle interest is the data collected through the use of an instrument created by Donald Ecroyd and his associates at Temple University. This questionnaire elicits the perceptions of skill emphases in each of the four skill areas of concern to the program: speaking, writing, listening, and reading.

Throughout the three years of the NEH-funded program students and professors in various classes were asked to respond to this instrument, indicating whether certain specified skill-related items were expected of the students and not worked on further in the class, or were specifically dealt with in the class, or, finally, were irrelevant to the class. Responses were sought in classes taught by faculty who had gone through the NEH-funded workshops, in classes taught by faculty who had not gone through the workshops, and in "traditional" communications classes; "Fundamentals of Composition" classes, and "Reading Development" classes devoted to the more traditional method of attacking skill development.

The data from this three year, longitudinal study of the perception of skill emphases was analyzed using analysis of variance techniques to discover any differences that might be attributable to the program. Differences between the perceptions of the students and their professors, in the three types of classes were subjected to this analysis. ($p < .05$ for all tests deemed to be significant.) Finally, changes over time for the students in classes taught by NEH and Non-NEH participants were

analyzed. The results, while varying somewhat for the four skill areas, do suggest some interesting conclusions. The following discussion first focuses on the differences among the three class types and between the professors and their students and then considers the changes witnessed over the three years of the program.

It was expected that both students and professors would perceive that greater efforts to improve specific skills would take place in the traditional communications courses. This was indeed the case. In all four areas, speaking, writing, listening, and reading, there was a significantly greater perceived emphasis placed on the development of skills in the traditional classes than in either the NEH classes or in the Non-NEH classes. This difference was greatest in the areas of speaking and writing and less so in the other two areas, although all areas were statistically different. This is to be expected, given that these classes are labelled composition, speech, and reading and clearly address those skills.

In their response to the various items on the questionnaire, students and professors were asked to indicate whether the item was "expected," "worked on," or "irrelevant" to the course content. Thus, the more the respondents marked of one category, the fewer possible responses in the other two categories. Therefore, it comes of little surprise that students and professors indicated fewer "expected" items in the skills courses than in the other two course types, in all four areas. The extent of differences varied, depending on the skill being assessed, but was significant and consistent in all areas, with the greatest difference in the area of reading.

Given the "forced-choice" nature of the instrument, it would be expected that the "irrelevant" category would be similarly skewed with the skills courses, once again, having the fewest number of "irrelevant" responses. This was so for speaking and writing, but was unclear for the areas of listening and reading. In the reading area, professors perceived the differences in expected directions (i.e. - fewer irrelevant items for traditional skills classes and more for the other two types of classes), but students indicated more irrelevant items in courses taught by NEH participants than in courses taught by others. For listening, the responses were as predicted for the students, but professors who did not participate in the workshops in the Non-NEH classes perceived fewer irrelevant items than did their counterparts in the other two type classes.

The comparison of the three class types over the four skill areas was undertaken to reveal, in part, whether the workshop trained professors would produce classes that would appear similar in content and thrust to the traditional communications skills couses. If the workshop had effect, it was hoped that the responses of the NEH students

and professsors would not differ significantly from those in the traditional courses, but would differ from those who did not participate in the workshops. The analysis revealed significant differences among the three groups for all skill areas and for all types of responses except for "reading irrelevant items for professors." ($p<.05$) With the exception of the "irrelevant" items, the direction of differences was as hoped. Both students and professors alike perceived significantly greater similarities between courses taught by NEH participants and traditional skills courses than between courses taught by NEH participants and non-participants in terms of what is expected and what is worked on in the courses. Greater work was done in each area in the skills courses. Professors who experienced the NEH workshops did differ from those who taught the traditional skills courses in the extent of work done with skills, but did do significantly more work with skills than did professors who did not attend the workshops. Professors teaching traditional skill courses expected fewer "givens" in handling skills than did NEH participants, and those participants expected fewer "givens" than did Non-participants. Professors indicated these significant differences mirrored those in the "worked on" category and were in the predicted direction.

Of particular interest were the findings concerning the differences between students and professors within the various course types. A comparison of the responses of students and professors within course types revealed significantly less variation in those courses taught by NEH participants than in those couses taught by non-participants or the traditional skills courses. There was no significant variation between student perceptions and those of NEH participants in the areas of writing, speaking, listening, and reading in terms of "expected skills." There was no significant difference for these same respondents in terms of "worked on skills" in the areas of listening and reading, and minor, though significant differences in the areas of speaking and writing skills work. In the courses taught by professors who did not attend the workshops the differences were striking. Professors consistently perceived they expected more than students perceived the professors did. These differences were smaller in the areas of listening and reading, most probably because of a ceiling effect. For example, in the area of listening professors indicated 10+ items as being "expected" out of a possible 14. Students indicated they perceived nine such "expected" items. The same differences are noted in the "worked on" responses. In the case of writing, listening, and reading the untrained professors perceived they worked less on these skills than reported by the students. Only in the area of speaking did the perceptions of the students and untrained professors coincide. Similar discrepancies in perceptions were noted for the "irrelevant" category as well, except in the area of reading. In all other areas, professors noted significantly fewer items that were irrelevant than did the students in their classes.

An analysis of the changes in perception of students in courses taught by NEH participants and those in courses taught by untrained professors was undertaken to understand how the program had impacted over time on the course content over the life of the program. No significant differences were noted for the students in courses taught by NEH trained professors between the first and third year. This is quite remarkable given the very large N (1496). The power of the test was certainly sufficient (power = .99) to reveal even slight changes. This speaks to the consistency of the program of summer instruction and the importance of follow-up sessions to maintain the program. This lack of change is all the more impressive when contrasted with that of the untrained professors and their classes. Significant variation was found in all skill areas and for all response categories except for "reading-irrelevant," "listening-worked on," and "listening-expected." Since the N in this analysis was smaller (N=99) and the resultant power of the statistical test much weaker, the finding is telling. How teachers teach, and what they teach in the area of "skills" is not consistent without outside intervention, even given that the teacher is the "same" individual year to year.

It was hoped that the analysis of the program, over time, would reveal a "spread of effect" such that courses taught by untrained professors would begin to look more and more like courses taught by those who had been through the NEH workshop. The analysis did not reveal such a trend. Greater differences were noted between the courses taught by trained and untrained professors after three years than were noted after one year, save for a few response categories. There were no significant changes in "listening-worked on" and "speech worked-on." In the areas of "reading-worked on," and "writing-worked on" the responses were significantly closer. However, even in these four response categories, the similarities were only in amount of difference. Even in these response categories differences between trained and untrained faculty were significantly different and the direction of change was not linear over the three years. Comparisons between the first and second year revealed seemingly random variations in skills work in courses taught by untrained professors that was not reflected in the courses taught by trained professors, as previously noted.

The conclusions based on these findings must be somewhat suspect, given the fact that the responses reflect the respondents perceptions of what skills were worked on, or expected of entry students, or irrelevant to the class. Perceptions may differ markedly from actual behaviors. However, two of the goals of the NEH workshop were to train professors to more clearly understand what was happening in their classes and to communicate more clearly those perceptions to the students. The similarity of student and professor perception would indicate that goal had been partially accomplished. The data seems to indicate that the summer workshops and follow-up meetings did have some impact on how effectively professors communicated their perceptions to the students.

As noted, the consistency of the responses over time speaks to the power of the program as well. While untrained faculty may, from time to time, emphasize some skills more than did trained faculty, approach to skills by the trained group was consistent over time. Little variation was found over the three years. Further, the amount of skills work and the expectations of the trained faculty was significantly closer to the bench-mark set by those who teach traditional skills courses than were the expectations and amount of skill work done by the untrained faculty.

The implications for the future of the skills program seem clear in several regards. It was hoped that there would be a "spread of effect" from trained to those who did not participate in summer workshops that would not necessitate the formal training of the remainder of the faculty. The evidence presented above would suggest the opposite. It would appear necessary that all faculty undergo some sort of formal training in skills to sensitize them and aid them in this area. Informal peer training, such as would take place at coffee hours, is not sufficient. Existing faculty and new faculty members who have not undergone training in these skill areas need formal guidance. The data seem to indicate that the current method of preparing faculty does result in significant changes in faculty-student perceptions of skill work. This less than perfect fit between courses taught by trained faculty and "traditional" skill courses is to be expected. There is only so much time in any one course. Each course can not stress every skill area. Rather than suggest large changes in future skills training, smaller, fine-tuning changes may be indicated.

The mandate to work on skills given by the faculty several years ago has been reaffirmed by subsequent responses of students and professors.

The program seems to be working. The faculty and students see it working. Both groups want it to continue. Both see it as a necessary and distinctive feature of Central's overall academic program.

Central College is confident that their program will flourish, regardless of the vicissitudes of outside support. Further, they are certain, as only optimistic zealots can be, that sharing the responsibility for skill enhancement can be embraced as the center-most concept of education in a variety of academic institutions without a massive infusion of Federal money.